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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/909,038	07/19/2001	Dorit Wolf	3975.003	8471

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EXAMINER

ZHOU, SHUBO

ART UNIT PAPER NUMBER

1631

DATE MAILED: 05/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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**Office Action Summary**

**Application No.**

09/909,038

**Applicant(s)**

WOLF ET AL.

**Examiner**

Shubo "Joe" Zhou

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 February 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 10-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 10-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☒ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 9/24/01.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☒ Other: See Continuation Sheet.

Continuation of Attachment(s) 6). Other: English translation of IDS document: WO 00/15341.

### **DETAILED ACTION**

Applicant's amendment and request for reconsideration filed on 2/6/04, is acknowledged and the amendments entered.

Currently, claims 1-9 are canceled and newly added claims 10-17 are pending and under consideration.

### ***Information Disclosure Statement***

The reference WO 00/15341 in the IDS filed 9/24/01 was not considered in the Office action mailed 10/3/03 because it was not in English and no translation was provided. However, the reference was later translated into English by the Office and the version of English translation has now been considered. See attached copy of the English translation. Initialed copy of the form PTO-1449 is enclosed with this action.

### ***Specification***

The disclosure is objected to because of the following informalities:

Multiple paragraphs in the specification either do not end with any punctuation mark or end with a comma, e.g. paragraphs [0007]- [00011], [00031], [00033], [00035], [00038].

The specification appears to be directly translated from a document of foreign language and contains contents unrelated with the invention but related with translation, e.g. [sic; of] on page 6 and [sic; converting] on page 7. Applicants are requested to delete such language resulted from translation which is unrelated with the invention.

Appropriate correction is required.

The claim rejections under 35 USC § 112, second paragraph, and that under 35 USC § 101 set forth in the previous Office action have been withdrawn in view of the claim amendments, filed 2/6/04, which canceled the previously pending claims 1-9 and added claims 10-17.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

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invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 10-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wolf et al. (IDS document: WO 00/15341, 3/23/2000. See the attached English translation).

Claims 10-17 are drawn to methods for producing an improved catalyst comprising the use of crossing or mutation process.

Wolf et al. disclose a method of producing new catalysts. The method comprises providing the catalysts of first generation mixture, restructuring the catalysts using evolutionary principles such as crossing and mutations and through random selections using random generators to produce a second generation of catalysts. See pages 7-9 of the English translation. New generation of catalysts are tested for their performance. The steps are iterated until such time as no further improvement of the catalyst behavior can be ascertained regarding the activity and/or selectivity for the particular reaction under consideration. See page 9 of the English translation. Also see Tables 2 and 3 for the catalysts of the second and third generations. The mixtures are selected using numerical random generators such as G05DYF, G05DZF and G05CCF of NAG Library. See page 22 of the English translation. Wolf et al. does not explicitly recite an equation for probability for selecting a new generation of mixed catalyst that is identical in form to the one recited in claim 1 of the instant application.

However, the equations Wolf et al. disclosed on pages 10-15 of the English translation are similar to the equation required in claim 1 and for the same purpose: selecting a new generation of mixed catalyst with high probability. Further, like what is required in the instant

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claim 1, the selection process by Wolf et al. is performed and the equations are derived using the same numerical random generators: G05DYF, G05DZF and G05CCF of NAG Library. See page 16 of the English translation. Therefore, it would have been obvious to one of ordinary skill in the art that an equation similar to what is disclosed by Wolf et al. that is also derived from the same numerical random generators that would serve the same purpose of calculating the same probability.

### ***Conclusion***

No claim is allowed.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shubo (Joe) Zhou, whose telephone number is 571-272-0724. The examiner can normally be reached Monday-Friday from 8 A.M. to 4 P.M.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Woodward, Ph.D., can be reached on 571-272-0722. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application should be directed to Patent Analyst William Phillips whose telephone number is 571-272-0548, or to the Technical Center receptionist whose telephone number is (703) 308-0196.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Shubo (Joe) Zhou, Ph.D. 

Patent Examiner

 29 April 2004  
JOHN S. BRUSCA, PH.D.  
PRIMARY EXAMINER